



Witconsin Holdstein sets 72, 170 milk production record Stranz 20, 2016 BREAKING NEWS from Holstein USAI Congratulations to Behnke family and Bur-Wall Registered Holsteins in Brooklyn, Wisconsin I Bur-Wall Buckeye Gigi set the National Milk Production record, calving at interears and three months, and set a 365-day record of 74,650 pounds or the set of the se					atulations to the Visconsinl calving at 650 pounds of milk.	
		RHA (Ib)				
Stat	Cow # Milk Fat Protein Chee				Cheese	
Average	Average 486 31,297 1,154 961 3,12					
Std. Deviation	500	1,622	90	57	203	
Min	20	30,141	981	857	2,733	
Max	Max 3490 41,364 1,677 1,288 4,39					
Sept. 2015						
111 Herds >30,000 lb RHA which represents 2.5% of herds on test there						
+30 WI Herds >30,000 lb RHA at NorthStar DHI						





Survey Herds					
	5-Herd <u>Summary-3</u>	3-Herd <u>Summary-2</u>	6-Herd <u>Summary-1</u>		
No. Milking Cows	85 - 2274	60 - 331	280 - 570		
	201 274	2012 2212	201 211		
	32K - 37K	30K - 33K	29K - 31K		

Forage Program—Milking Cows

	5-Herd <u>Summary-3</u>	3-Herd <u>Summary-2</u>	6-Herd <u>Summary-1</u>
Dry Hay	4/5	3/3	3/6
Alfalfa Silage	5/5	3/3	6/6
Corn Silage	5/5	3/3	6/6

Herd or High Group Forage

	5-Herd <u>Summary-3</u>	3-Herd <u>Summary-2</u>	6-Herd <u>Summary-1</u>
Forage % of Diet DM	50 - 60	51 - 58	45 - 63
Alfalfa % of Forage DM	33 - 65	40 - 60	32 - 59

Calculated from Survey Summaries



% of Dietary Nutrient Provided By Forage





Maintenance & BWG energy requirements apportioned to forage or concentrate according to diet F:C ratio



noaibs//<mark>///U</mark>

Department of Dainy Science

Corn Silage vs. Alfalfa Silage

- Lactation performance benefit to feeding 1/4th to 1/3rd of forage DM as corn silage
- Similar lactation performance for 1/3rd to 2/3rd of forage DM as corn silage
- Feeding 3/4ths or more of forage DM as corn silage creates nutritional challenges
- > High Corn & Low/Moderate SBM prices favor higher corn silage diets
- Low Corn & High SBM prices favor higher alfalfa silage diets
- Neither forage is favored when Corn & SBM prices are both either high or low
- DM yield per acre advantage for corn silage over alfalfa silage the major factor

								ARTMENT OF AIRY SCIENCE versity of Wisconsin-Madison
Comparative Forage Characteristics								
	Alf	Alfalfa Corn Silage <u>G</u> rass W					Wheat	
<u>Nutrient</u>	Early <u>Cut</u>	Late <u>Cut</u>	Conv. <u>Hybrid</u>	<u>BMR</u>	<u>Leafy</u>	Early <u>Cut</u>	Late <u>Cut</u>	<u>Straw</u>
СР	++	+				+	-	
RDP	++	+				+	-	
RUP	-	-				-	-	
NDF		-	-	-	-	+	++	+++
NDFD	-		+	++	+	++	+	
iNDF	+	++	-		-		-	+++
peNDF	+	++	-		-	+	++	+++
NFC	+	-	+	+	+	-		
Soluble Fiber	++	+	-	-	-	-		
Starch	-	-	+	+	+	-	-	
TDN, NEL	++	+	++	+++	++	++	+	-



ivNDFD vs. DMI, FCM & FE						
High - Low ivNDFD Forage						
	<u>4%-</u>	<u>units</u>	<u>10%-</u>	<u>units</u>		
Response (lb/cow/day)						
Review Papers	DMI	<u>FCM</u>	DMI	<u>FCM</u>		
Oba & Allen, JDS, 1999	1.6	2.2	4.0	5.5		
Jung et al., MN Nutr. Conf., 2004	1,1	1.2	2.6	3.1		
Ferraretto & Shaver, JDS, 2013	0.7	1.2	1.8	3.1		
Average	1,1	1.5	2.8	3.9		
Tabular data calculated from reported responses per %-unit difference in ivNDFD						
Feed efficiency seldom improved statistically						

NIDED topics	• Lionin	Lignin
NOI D'IOPICS	 Content; Composition? 	Is a polymer of aromatic alcohols
	 Stage of Maturity 	Снеон сснон
	 Hybrid/Variety 	Content alcohol courtany alcohol sinapy alcohol
	 Type vs. Individual Environment; G × E 	
	• Grass vs. Alfalfa	
	 Mixtures Maturity: Variation 	
	• Crop Fungicides?	
	Cutting height	
	 Chop length 	
	 Crop Processing? 	
	• Ensiling	
	 Time in storage 	
	 Inoculants?; Enzymes? 	
	• TMR	
	• peNDF	
	• Starch	











.012 03 /	Feb.	-2013	rieru Jizi
Herd Size	% Dairies	% Cows	% Milk
2000+	1.5%	32.6%	34.7%
1,000-1,999	1.8%	14.0%	15.9%
500-999	3.1%	11.9%	12.4%
200-499	7.5%	12.5%	12.6%
Total ≥ 200	13.9%	71.0%	75.6%

Feed & Forage Use on 4000-Cow Dairy

- Assumptions for calculations:
 - 3200 milk cows; 800 dry cows; no growing heifers
 - 80 lb. Milk/cow/day
 - Total DMI
 - Lactating Cows (LC) 50 lb/d; Dry Cows (DC) 30 lb/d
 - Dietary Forage Content (% of DM)
 - LC 50%; DC 80%; Total 54%
 - -Forage DMI:
 - LC 25 lb/d; DC 24 lb/d

Total Feed Use	on 4000-Cow Dairy	
	TMR Fedª (tons DM)	
Daily	95	
Weekly	663	
Monthly	2,843	
Annually	34,587	
	Approx. Annual \$ Value	
	\$7,000,000 to \$9,000,000	
Approx. Milk \$ Value	\$15,000,000 to \$20,000,000	
Approx. Milk \$ Value	\$15,000,000 to \$20,000,000	

	Forage Needs @ 15% Shrink Tons DM	Acres Needed @ 6 ton DM avg. yield
Daily	51	9
Weekly	411	69
Monthly	1,763	294
Annually	21,444	3,574

Forage Use on 4000-Cow Dairy

Acres Needed
+397
+576
+1,038



Dry Matter Loss for Forage Harvest and Ensiling						
Dry Matter Loss						
	Range	Normal				
	(%)	(%)	<u> </u>			
Mowing/Conditioning Haylage	1-4	2				
Respiration Haylage	1-7	4				
Rain (Haylage only)	0-50	varies				
Raking Haylage	1-20	5				
Merging Haylage	1-3	1				
Chopping Haylage	1-8	3				
Chopping Whole Plant Corn	0-1	0.5				
Storage Filling	2-6					
Ensiling, Storage & Feedout	10-16	12				
(bunker)			Wisconsin			
Haylage Total	17-64		Forage			
Whole Plant Corn Total	12-23		<u>Extension</u>			

Dry Matter Losses From Different Levels of Silo Management

Losses From	Excellent	Average	Poor
Respiration	< 1%	< 2%	> 5-10%
Fermentation	< 3%	3-5%	10-15%
Seepage	0%	< 1%	>5%
Storage (aerobic)	3-5%	5-6%	>10-30%
Total	8-10%	11-15%	20-40%
Slide courtesy of Brian Holmes, UW Madison			









- Feed Inventory & Crop Rotations
 - Lactating Cows vs. Dry Cows vs. Replacements
 - Corn Silage vs. Haycrop Silage
 - Carry-Over of Corn Silage & High-Moisture Corn
 - Cover-Crop Forages
 - Low-K Forages
- Manure Storage & Application
- Nutrient Management Plans
- Expansion Planning

- Yield vs. Quality
 - Targeting relative qualities to livestock groups
 - Targeting harvest maturity by crop/livestock group
 - Proportion of corn silage to haycrop silage
 - Opportunities grasses or alfalfa: grass mixtures
 - Hybrid, Variety Selection
 - BMR corn silage; Reduced-lignin alfalfa
 - Crop Fungicides
- Feed Testing
 - Reducing variation
 - Benchmarking

- Harvest & Storage
 - Custom Harvesting
 - Firm Selection; Cost; Communication; QC
 - Harvest Maturity, Moisture Guidelines; QC
 - Chop Length, Processing Guidelines; QC
 - Silo Packing, Covering, Face Mgmt.; QC
 - Silage Inoculant Selection & Use

- Feed Value
 - Nutrient value
 - Pricing
 - Purchase
 - Sell
 - Assets
 - Contracts

- Management/Consultant Team Meetings
 - Define Roles
 - Provide Leadership
 - Set/Review Goals
 - Forward Planning
 - Benchmark Comparisons
 - Identify Bottlenecks
- Staff Training



Visit UW Extension Dairy Cattle Nutrition Website

http://www.shaverlab.dysci.wisc.edu/

